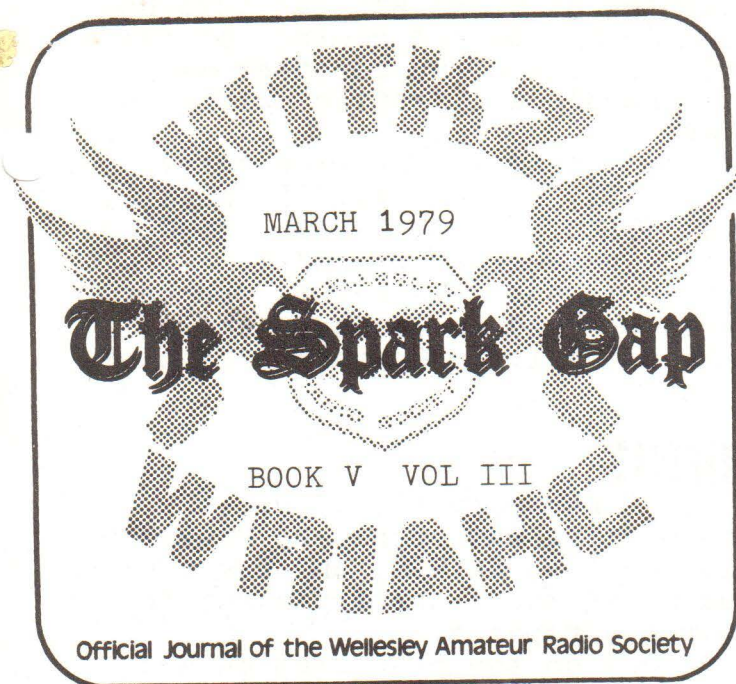




What is a Radio Club?

By Jim Hatherley, WA1TBY

What is a Radio Club? What does it do? Why should I join a club and if I did, what benefits would I gain from doing so? These questions are some of the ones I have heard during my short hamming experience of five years.

First of all, a radio club is an organization made up of fellow Amateurs who are interested in a hobby and by sheer weight of numbers, can help enhance the furtherment of the art by exchanging ideas together. They can lend their expertise in the many areas of Amateur radio as well as receive the same from the more knowledgeable. A club is a central point for aspiring future Novices to come to learn through our Amateur classes. A club plans many other activities to help you get further enjoyment out of our hobby. It is a focal point for planning emergency communication procedures. I could go on and on, but I am sure you are aware of the many functions of a radio club.

A club helps keep its members informed of the latest news pertinent to the hobby. It provides interesting speakers and films at the club meet-

ings and in general, complies with the first rule of being there as a public service vehicle.

As good as all this may sound, no club is any better than the members it has in it and how much they are active in keeping the club going. Manpower is necessary to any club's success. But, at the same time, it also provides the active member with a greater sense of fulfillment by being part of it.

I have seen this club grow from a small group into one of the best clubs in the area and as much of a great job they did, many sat in the woodwork letting it all happen. Many felt that since such a great job was being done, their contributions would be of little or no consequence. WRONG! Everyone has something they can give no matter how large or small it may be. Many a great idea has come out of one of those so called 'stupid' thoughts. Ask big business and they will tell you story after story of this. So come on to the meetings and get in your "two cents worth". If you are unable to get to the meetings, then write a note or a letter to Nels Anderson, K1UR, our Spark Gap editor, and make your views known. He would also be happy to have some feedback from you for publishing in the paper.

With so many events just around the corner, our auction on April 7th, the BAA Marathon April 16th, and the annual Field Day, there are plenty of activities for you to engage in and see about that fulfillment that goes with those who are active as opposed to the people who just sit back and watch things happen and pass them by. □

This month's speaker will be Mike Adlerstein, K1FB, who will talk at the March 1st meeting. His exact topic was not available at press time, but if his past talks for the club are any indication, it should be an interesting evening. Hope to see you there.

MEETINGS THIS MONTH: _____

March 1, 1979 at 7:30 pm

March 15, 1979 at 7:30 om

Intermediate Bldg., Wellesley Hills, Mass.

education corner

The spring session of the WARS Novice course got under way January 29.

We have 23 students enrolled whom we hope you will soon meet on the air.

Instructors are Dick Magnanti, WB1BUQ, and myself.

ATTENTION: Hi-Fi and CW Buffs--

The Wellesley license classes need a prerecorded cassette tape for use in giving qualifying Novice CW examinations. This tape must be perfect copy at exactly 5 words per minute, and should include several sections each five minutes in length.

Anyone who can generate a quality tape of this sort please contact me.

HELP WANTED--

Novice and General course instructors are needed for future Wellesley license classes. No previous experience required. Major qualifications are enthusiasm and a desire to help others.

Here's your chance to share the fun of our hobby and to broaden its base.

If you can assist in this program, please contact me at club meetings, or call 653-6462 weekdays.

73, Bill Hanlon, N1ADY□



ACTIVITIES ≡

On January 28, 1979, Wellesley and surrounding towns were struck by the worst ice storm in 20 years, resulting in loss of normal communications. Don't remember this storm? Well, it didn't actually happen, but was the subject of the 1979 Simulated Emergency Test, or SET, sponsored annually by the ARRL. This year's SET was organized by Wellesley Emergency Coordinator David Curry, K1TK, to simulate the kind of emergency which is frequently found in this area in the winter.

During the event stations were put on the air from the Newton-Wellesley Hospital, the Wellesley fire station, the Wellesley High School (which would likely be an emergency shelter in an actual emergency), and several other locations around town. The communicat-

ions center at W1TKZ was put into operation to act as net control of the activities. the 63/03 repeater was used to handle all traffic during the "emergency".

The following people were active in the 1979 SET: WA1YOJ, WA1YOL, WA1ZLQ, WB1BUQ, WB1BUT, N1ADY, N1ABZ, K1UR, and K1TK, as well as WA1PQY/R.

If you missed this event, the next SET will be held in October, and will be held annually in October from that time on. □

Minutes

Meeting of February 15, 1979:

The meeting was opened by President Donald Chesley, WA1HVS, and began with a reading of the secretary's and the treasurer's reports.

A report on the club station was made, with a reminder that it is open to all members on a 24 hour in advance notification of station manager Dick Paret at 762-5074. The RTTY unit is now in operation on receive, with the hope of getting it on transmit in the near future.

Reports on progress on the BAA Marathon and club auction were made.

It was announced that two executive meetings would be held in March.

Bill Downing, WA1PQY, gave a report on the Field Days sites.

It was announced that the new constitutions would be mailed out within a week, with ballots enclosed.

The sale of WA1PQY/R, the 63/03 repeater to the club will be decided in the March 15th meeting.

The meeting closed with the showing of slides taken by Glenn Brodie, N1ACN, of last June's VHF contest expedition to Mt. Equinox in Vermont.

OFFICIAL BULLETIN

Nr 742 Dated January 25, 1979

FCC has extended the comment deadline on General Docket 78-365 to March 22, 1979. Reply comments will be due on April 23, 1979. The docket proposes changes in the Amateur rules which would establish criteria to ensure interference protection for FCC monitoring stations from Amateur Radio stations. Refer to February 1979 QST, page 62 for more information on this docket. □

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society



EDITOR-IN-CHIEF: NEILS J. ANDERSON, K1UR
32 WESTGATE ROAD, APT. 6
CHESTNUT HILL, MASS. 02167

THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, F.C.C. RULES & REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SEND THEIR ARTICLES (TYPEWRITTEN IF POSSIBLE) TO THE EDITOR-IN-CHIEF OR TO THE CLUB ADDRESS.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS \$5. THE CLUB YEAR RUNS FROM SEPTEMBER 1 - JUNE 30. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
324 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181



Minutes

By George Young, WA1YAU

Meeting of January 18, 1979:

Meeting opened at 8:20pm by president Don Chesley. The president referred to the ARRL Ten Meter contest, and named eight operators who participated in it.

Talking about the executive committee meeting, the president said that the committee discussed the revamping of the education program and the emergency communications support plan.

On Field Day, the following sites were discussed: Martha's Vineyard, New Hampshire, Wellesley Town Hall, the Marconi site at Wellfleet, and the Quabbin Reservoir. It was decided to publish these locations in the March Spark Gap and later vote on them.

It was announced that the club auction would be on April 7th.

It was announced that, starting in fall, the club will hold a QRP/QSO Party in October, and the WARS QSO Party will be held the following February. Three awards were announced.

The president announced that the

vice president, Pete Spotts, N1ABS, will be moving to Chicago in April. He asked those attending if this position should be filled before the May election. No decision was reached on this.

Finally, Jack Carroll, AB1Z, brought a petition concerning the bandwidth regulations of the FCC. The meeting closed at 9:50pm. □

Executive Minutes

Meeting of February 3, 1979:

The meeting was called to order at 8:50pm by president Donald Chesley. The procedures for voting on the proposed new constitution were discussed.

The discussion of sites for Field Day was continued (see complete report elsewhere in this issue).

The education chairman, Bill Hanlon, N1ADY, gave a report on ideas to improve the education program.

Progress on the auction to be held on April 7 was reported. Some notices were already available and word was being passed to magazines, etc.

The club's participation in the Boston Marathon was discussed. The operation will be similar to last year, with some additional responsibilities. All people planning to participate in either the Marathon or auction are asked to sign up at the club as soon as possible.

The possibility of acquiring a six meter rig for use in VHF contests and at the club station was discussed. The purchase of an HA-6 transverter is under consideration.

Further discussion of a permanent antenna installation for W1TKZ was held. This is still being looked into.

The quality of printing of the Spark Gap was discussed, as several members had mentioned that it was not as good as we have been used to. The necessity of getting better quality printing for the club's certificates was decided upon, but no change in the printing of the Spark Gap will be made at this time.

Finally, the purchase of the 63/03 repeater currently owned by Bill Downing, WA1PQY, with the help of several others was discussed. The purchase price to reimburse the current owners would be about \$675. This will be discussed at a regular club meeting. □

profiles

By George Young, WA1YAU

In this issue, Profiles centers on John Chapman, WA1WER. A native of New Hampshire, John is a graduate of the University of New Hampshire. As a youth living in Wakefield, NH during World War II, he built a short wave receiver with the intent of becoming a ham. But because of restrictions placed on Amateur Radio operations during the war, John lost interest.

Thirty years later, in 1975, Bob Woodbury, K1ZL, revived John's interest in Amateur Radio by selling him a HW-7. That same year, he obtained his Novice license, plus his present call of WA1WER, and passed his General exam in August of 1977. John enjoys QRPing and operates an HW-8 for use on all bands, although he is presently concentrating on 15 and 20 meters in order to obtain four western states for WAS.

Last summer, John was able to go to Switzerland and, with temporary license in hand, operated a portable HB9 station. He discovered that, because of the many languages spoken in Europe, European hams preferred quick QSOs since one ham can't speak another ham's language. Another problem was that it was difficult to communicate by ground wave as a result of the language barrier. He got around this by calling up a local ham and asking him to hold a QSO. All in all, it was a pleasurable experience.

John, who is married and has two daughters and a son, presently lives in Dover and works in Lexington as a plant engineer. □

Auctions / Flea Markets

March 31: Worcester Polytechnic Inst. Wireless Association, W1YK, flea market, at Morgan Hall, WPI (off Rt. 9). Hours are 9 am to 4 pm, admission 50¢. Full snack bar. Tables are \$5 for a 3x8 and \$4.50 for a 3x6. Talk in on 52/52 and 147.99/39. Reservations and further information via Box 2393 WPI, Worcester, Massachusetts 01609.

April 1: Framingham Amateur Radio Association electronics flea market at rear of Framingham police station. Set up from 9 to 10 am, open at 10 am. Talk in 52/52 and 75/15. Food available. \$5 for tables in advance, if any left \$7.50 at the door. More information via P.O. Box 3005, Framingham, Massachusetts 01701.

April 7: Wellesley Amateur Radio Society Auction, check in at 10 am, auction starts at 11 am. Wellesley High School, 50 Rice Street, Wellesley, Mass. Talk in 96/36, 04/64, 63/03.

April 21: South Shore Repeater Assn. auction, Central Junior High School, Broad Street, Weymouth, Mass. Check in starts at 9 am, auction at noon. Talk in on 90/30 and 52/52. Details via SSRA, Town Hall Annex, 402 Essex St., Weymouth, Massachusetts 02188.

April 22: PVRA second flea market and auction, 10 am to 5 pm. Newington High School, Newington, Conn. Further information via Arnie K1NFE at 203-589-3333.

April 27: Central Mass. ARA auction, 7 pm at the American Legion Post, 1024 Main Street, Worcester, Mass. □

ELECTRONICS EXCHANGE

Heathkit HW101 transceiver with power supply and manuals, matching Electro-Voice microphone. \$375.00 Call Jim Murphy, WB1BUR, at 289-0769.

Kenwood TS-520S with cw filter, key, in original carton with all instructions. Originally \$849, sell for \$555 or \$575 with Turner +2 microphone... Wilson 1405SM handie-talkie with touch tone pad, 8 sets of crystals, nicads, charger, all instructions. Originally \$425, sell for \$260... Kenwood TS-700S all mode 2 meter rig with touch tone pad and all instructions. Originally \$745, sell for \$520 or \$530 with 5/8 magnetic antenna... 2 meter 5/8 wave magnetic mount antenna \$16... Turner +2 preamplified microphone \$26. For any of the above items, call Chad, N1ABZ, at 235-5114. □

"Timeout!"

By Mike Adlerstein, K1FB

Did you ever wonder how your 100 watt peanut whistle could be heard thousands of miles away? It would seem that after that much power spread out over such a great distance, there would be little left to wiggle the electrons on a tube grid. It's interesting to play with a few numbers to get a feel for where the power goes.

If you get an "S9" report from Australia, that implies that 50uv is appearing at the receiver antenna input. From the formula $P=V^2/R$, assuming a 50Ω antenna ($R=50\Omega$). This means that the antenna is intercepting a power level of .00000000005 watts (5×10^{-11}). Your signal has suffered an attenuation of 123 db!

Let's assume that both you and the station you were contacting were in free space. How far apart would you have to be before your signal would be at the S9 level? It can be shown that when power is radiated uniformly in all directions, that the power impinging on a given receiving antenna decreases as the square of its distance away. This is so because the radiation can be viewed as expanding outward as an inflating balloon. The surface area of the sphere increases as the square of the radius. Hence the power over any given area must decrease by this same proportion.

A half wave dipole intercepts all the incoming energy over an area approximately $(1/4\pi)l^2$, where l is the wavelength. Thus the total power intercepted from a transmitter with power output of P_{out} , a distance of d away is approximately:

$$P_{absorbed} = (1/(4\pi)^2)(l^2/d^2)P_{out}$$

Therefore, to produce an S9 signal in outer space on 40 meters with a 100 watt transmitter, two stations could be up to 4500 km or 2810 miles apart. The distance to Australia is about ten thousand miles and signals can be much stronger than S9.

The above exercise is just to show the role of skip and directional ant-

ennas in focusing radiated energy at far away places. This effect is often overlooked when considering the major effect of skip: bending waves around the curved surface of the earth. Without this bending, no amount of power would put your signal into Australia. □

FIELD DAY!

By Bill Downing, WA1PQY

Field Day is an ARRL-sponsored annual test of the emergency capability of Amateur radio operators. It is a time to fire up the generators, batteries, solar cells, and put together a working communications facility in the field.

The Wellesley Amateur Radio Society will be considering a number of sites. Among the choices so far are several locations on the island of Martha's Vineyard and the MDC park on the southern shore of Quabbin Reservoir in central Massachusetts. We plan to visit all these sites and make a final determination by the March 15th club meeting. Any suggestions for additional sites to visit are welcome.

In March, a preliminary sign-up sheet will be circulated to get an idea of the number of members attending Field Day 1979.

More details will be available in the months ahead. I hope you can join in the fun this year! □

hr REPORT

Clarence Moore, W9LZX, inventor of the quad antenna, passed away suddenly January 24 at his home in Syracuse, Indiana. He was minister in the United Missionary Church, and developed the quad while serving as engineer at the missionary station HCJB in Quito, Ecuador. He had been recently honored with a lifetime HC1JB license by the Ecuadorian government and was working actively on a new antenna design when he died at age 75.

hr Report, February 2, 1979 □

SOLVING THE CALL LETTER IDENTITY PROBLEM

by Eric G. Shalkhauser, W9CI

The confusion among radio Amateurs over callsigns is not a new problem, though the FCC's new callsign program does not help the problem any. Early Amateurs before the days of the FCC made up their own callsigns, but this period did not last long.

The early assignment of call letters among United States Amateurs was simple: the district number (1-9) was followed by either two or three letters of the alphabet. But as Canadian and foreign stations were contacted with similar and often identical call letters, confusion arose unless an additional first character was added. To correct this problem, the ARRL initially suggested that the United States Amateur simply use "de" and the Canadians the letter "v" before giving their call. This soon proved inadequate and gave way to an assigned alphabetical letter as follows:

A-Australia	M-Mexico
C-Canada	R-Argentina
F-France	Z-New Zealand
S-Spain	N-Netherlands
U-United States	O-South Africa
G-Great Britain	P-Portugal
I-Italy	C-Cuba

This plan was first adopted as of December 15, 1922, however these letters did not conform to those assigned by the countries respective governments. Additional letters were required from time to time and assignments were made by the ARRL Operating Department. Several two-letter "prefixes" were needed toward the termination of this method of call-letter designation. The letters were used for a time by all Amateurs, except in Britain where permission was not granted.

It was not until 1928 that the letter "W" formally was required for use as a prefix by American Amateurs. Not until almost 30 years later was the letter "K" added as a prefix. Later it was necessary as the Amateur population grew to add WA, WB, WD and now the whole mass of prefixes brought in to use in early 1978. □

via QCC News, Chicago QCWA chapter

How's DX

by Bob Czajkowski, N1TZ

DX is with us and long range forecasts indicate that 1979 will be a good year. All bands 80 through 10 are open each day with DX all around us and not just the DK's and JA's. There is a lot of rare and semi-rare DX around if you know what, when, and where to look for it. Don't overlook the lower bands and especially on CW. With the advent of transceivers and the influx of new Amateurs crowding the bands some of the pile-ups are getting out of hand. The rarer the DX station, the more he tends to hide from the pile-ups. As a result, a lot of good DX can now be found hiding out high in the General portions of each band as well as below the phone portion. Many of these stations will come back to U.S. Amateurs if we call on CW. Remember, a good DXer with a high country total is one who spends more time listening than talking.

A recent meeting of the Southern New England DX Association produced a heated debate concerning problems common to the DXer today. Inputs are being sought from all over the country from DXers looking for some solutions to the problems such as "list operations", DX pile-ups getting out of hand, country status, etc. Tony Berg, W1OT, who is our New England DX representative has been elected Chairman of the ARRL DX Advisory Committee. Tony reports back that he is seeking inputs from clubs and DXers concerning any DX problems that should be brought to national attention.

Going back to the debate, as you can guess nothing was really solved but the feeling of most prominate DXers was that clubs on the local level should undertake an education process for newcomers to DXing, covering things like customs, do's and don'ts. It is being felt nationwide that many newcomers to DXing from the CB bands tend to bring along many bad habits which tends to increase the problems. □

tnx CMARA, January 1979

Amateur Radio In The USSR

Any Amateur operating the bands and particularly CW can't help but be impressed by the proficiency of Russian Amateur operations. They really move along with good accuracy. If an American Amateur works them, he has to move his electronic keyer's speed or get his straight key really hot to stay up with them. Although, at times, their tones may leave something to be desired, which is understandable from some of their locations, their operating ability and lack of errors should be emulated by American Amateurs.

One has to wonder: Here is a capitalistic country where we have all the advantages, how did these Amateurs get so good? Why isn't the average American operator as good? To find the answers to these questions, one has to look at the background of the average Russian Amateur and how he got his license. It is a lot harder to get a ham ticket there than here, is one of the reasons. To become a ham, a Russian must take an electronics course, join a radio club, and take a test. The applicant is then allowed to LISTEN, we emphasize, listen, on the Amateur bands and log stations and be able to send code at 10 wpm. This may be one of the reasons that we American Amateurs receive quite a few cards through the bureau from Russian SWL's.

After six months as a SWL, a third test may then be taken. This allows 10 watts on 80, 40 CW and 10 meter phone. The next step up, the second class license is harder and permits 40 watts and CW operation on most bands. The top ticket is the first class license and requires the operator to send and receive at 18 wpm, build, design, and troubleshoot advanced radio gear. Maximum power on all bands is 200 watts. All applicants must demonstrate also an elementary knowledge of the English language. Russia does not want any "dumbkoff" operators and they must know the Q signals extremely well. One can see that by the time a Russian has received his first class ticket, he has been exposed to a lot of required operating time and particularly listening.

Another factor is the following: to

make up for their personal lack of funds or access to radio equipment, every Russian town has its Amateur radio club where newcomers are brought up through the ranks and have the further advantage of observing experienced operators in action and offers a place to gain actual practical experience before they ever get on the air.

One can't help but wonder, would we have as many American Amateurs if such a required procedure prevailed in this country? What do you think? □

Thanks to Triple States RAC, Adena, Ohio, "Bull'n'ten" via ARNS.

hr REPORT

License fee refunds came a step closer to reality with Commission adoption of a first Report and Order on its fee refund inquiry, General Docket 78-316. Only fees above \$20 are to be refunded in this first phase, which will begin in about two months after the necessary fee refund applications and instruction packets can be printed and distributed.

Commission staff work has already begun on Phase II of the refund program, which will cover fees of \$20 or less. A Notice of Inquiry on Phase II is supposed to be ready for Commission action in 90 days.

hr Report, February 9, 1979

FCC's monitoring station protection proposal, General Docket 78-365, has received an extension of due date for comments to March 22. That NPRM "suggests" that stations operating near one of the Commission's monitoring sites "consult" with the site regarding the effect of their transmissions on the site's operations. Reply Comment due date is now April 23.

hr Report, February 9, 1979

There may be a lot more clubs providing coverage for road racing events like we do for the Boston Marathon if the article by WA5EBB in the January issue of "Runner's World" has any effect. The article was given a full two page spread, including photos, on how race organizers can use the resources of hams to help run their events. □

hr Reports, Continued....

FCC's personal radio division is being abolished as part of a sweeping reorganization of the Safety and Special Services Bureau approved January 15 by the Commissioners! In the reorganization Safety and Special Services is to be rearranged functionally rather than by service into four divisions: Policy Development, Rules, Licensing, and Compliance.

Safety and Special Services presently has three "service" divisions: Personal Radio, Aviation and Marine, and Industrial Safety and Public Service, all of which are going out of existence in the reorganization. In addition, there is also an Industrial and Public Safety Rules Division, plus a Legal, Advisory and Enforcement Division. With the reorganization, people working on rules, policy, legal or enforcement with the present service divisions, will, for the most part, probably end up in the appropriate new division. However, at this point little is known as to who, how, or when the shuffle will be accomplished.

Net result of the change is expected improvement in Safety and Special services overall efficiency, with much more flexibility in shifting workloads. What it will mean for FCC licensees such as Amateurs is less clear cut. Improvement in such routine matters as license processing seems certain, but where to go to get a question answered or discuss a problem could become difficult and confusing compared to the present setup.

The initial reorganization is to take place over the next few weeks, though it would seem inevitable that it will take a lot longer than that for the Safety and Special Services Bureau to get back to "normal" operation. Until that time, it's unlikely that much other than "routine" Amateur matters will be considered by the Commissioners.

hr Report, January 19, 1979□

Talk about spanning all points of the compass, Robert Morris, W2LV recently worked his 101st country via the satellites. He was also the third station to work the French station 8AB back in 1923 to inaugurate transatlantic Amateur radio.

hr Report, February 2, 1979□

Britain's first Amateur radio spacecraft has just been announced by the University of Surrey's Telecommunications Research Group. It's to carry a scientific payload, possibly including a TV camera for weather observations, and will include special features for educational use. A possibility of an early 1981 launch exists.

Russia's RS-1 satellite was off for the month of February apparently due to electrical problems. It is rumored that an RS-3 may be launched in March.

March is also OSCAR 8's first birthday, being celebrated on the 3rd thru 5th, with special commemorative stickers to all those reporting telemetry to the ARRL during this period.

hr Report, February 16, 1979□

ARRL's 220 MHz Novice proposal was assigned RM-3314 by the Commission on January 30th, an unusually fast response. At the same time the Commission also gave RM-3313 to the League petition to extend FM down to 52 MHz. Comments on both are due March 1st.

hr Report, February 2, 1979□

Hereabouts...

Congratulations go to Tony Fusco, WB1FTD on upgrading to General class, and to Ed Pavone, WB1ECR, on upgrading to Extra Class. Good going, guys, and any of you others who upgrade, how about letting us know.

Also, congratulations go out to Henry McDade, W1LMU, who was recently honored with a plaque from the ARRL for 50 years of membership in that organization.

Don't forget to make an entry in the first WARSWAS competition, which will conclude at the end of this month. We hear some of the members already have some pretty good state totals, so the rest of you better get going. Complete rules were in the last issue, and on the following page is the official entry form. Please send it into the club by April 10th and include any comments that you would like to make (i.e., should it be for a longer period next year, etc.). Good luck! □

Wellesley Amateur Radio Society



Name _____

Call _____

STATE	DATE	TIME	STATION	RST	
CONNECTICUT					
MAINE					
MASSACHUSETTS					
NEW HAMPSHIRE					
RHODE ISLAND					
VERMONT					
NEW JERSEY					
NEW YORK					
DELAWARE					
MARYLAND					
PENNSYLVANIA					
ALABAMA					
FLORIDA					
GEORGIA					
KENTUCKY					
NORTH CAROLINA					
SOUTH CAROLINA					
TENNESSEE					
VIRGINIA					
ARKANSAS					
LOUISIANA					
MISSISSIPPI					
NEW MEXICO					
OKLAHOMA					
TEXAS					
CALIFORNIA					
HAWAII					
ARIZONA					
IDAHO					
MONTANA					
NEVADA					
OREGON					
UTAH					
WASHINGTON					
WYOMING					
MICHIGAN					
OHIO					
WEST VIRGINIA					
ILLINOIS					
INDIANA					
WISCONSIN					
COLORADO					
IOWA					
KANSAS					
MINNESOTA					
MISSOURI					
NEBRASKA					
NORTH DAKOTA					
SOUTH DAKOTA					
ALASKA					